

The logo for BFGoodrich Aerospace is displayed against a background of a curved horizon of the Earth from space. The letters 'BF' are in red, and 'Goodrich' is in blue. Both are in a bold, sans-serif font with a 3D effect.

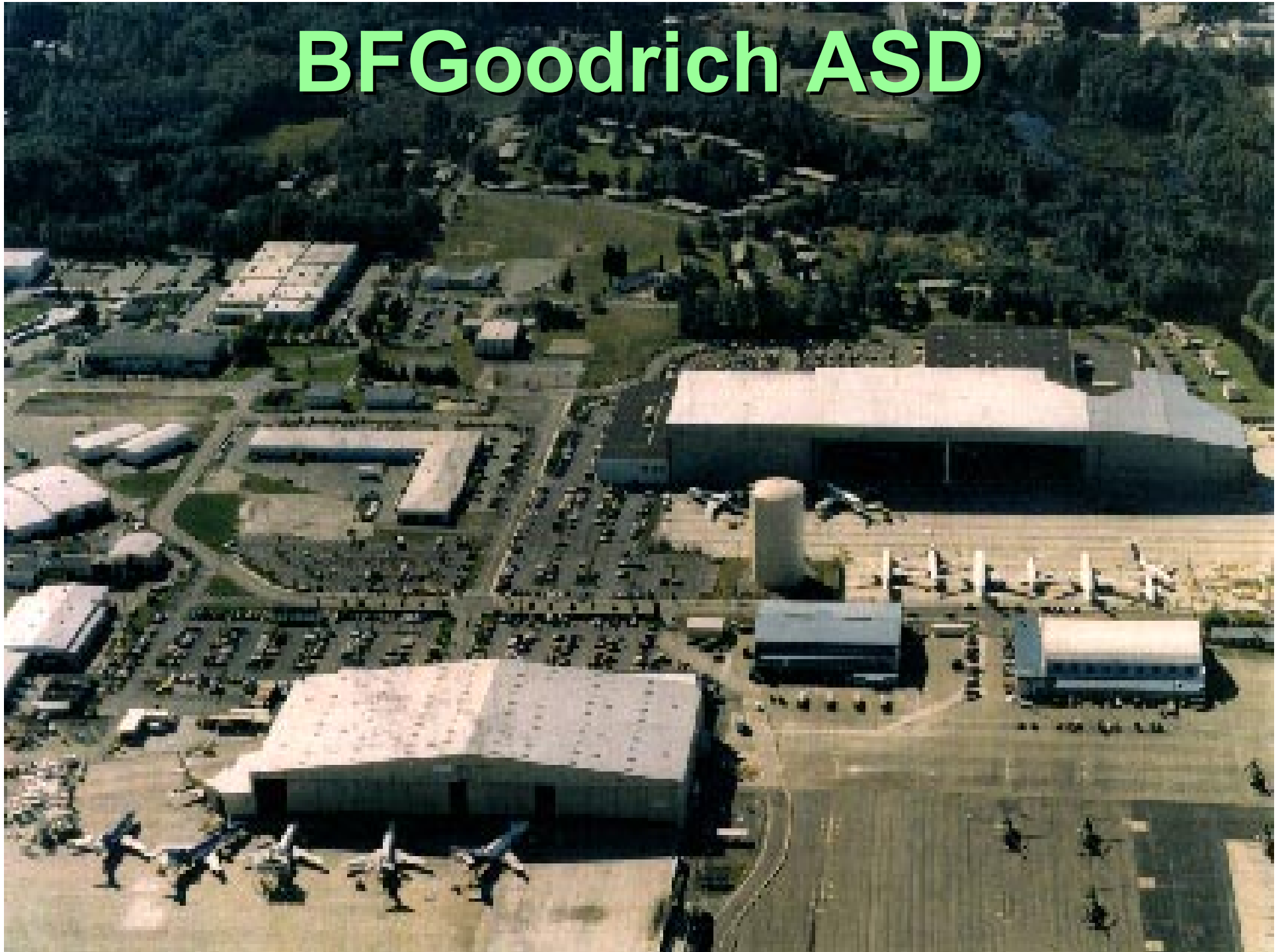
BFGoodrich

Aerospace

Maintenance Human Factors Program

**Error management in a 3rd party
repair station**

BF Goodrich ASD



The National Civil Aviation Review Commission statement

- **“It appears that the only way to obtain in-depth safety information within a company, between companies, or involving the FAA, is for people who operate in the system (pilots, mechanics, controllers, dispatchers, airlines, manufacturers, airport operators, etc.) to agree to disclose this information and to allow it to be consolidated and analyzed for accident prevention purposes. Individuals and companies will not agree to assemble or disclose safety data if it can be used punitively, be misinterpreted by non-experts, reveal trade secrets, or expose them to undue liability.”**

Create a Program Definition

- H-F oriented error investigation process
- Validation through special audits
- Data analysis
- Corrective action
- Measurement
- Feedback / training

Work Force Involvement

- **Amt's participate in investigations**
- **Encourage reporting of errors**
- **Amt's staff audit teams**
- **Work force develops corrective action**
- **Address disciplinary policies**
- **Feed data back to crews**

Perform Structured Investigations

- Don't try to become a human factors expert
- Focus on contributing factors
- Use a cook book
- Train the investigators

Validation - Maintaining Awareness

Focused continuing investigations

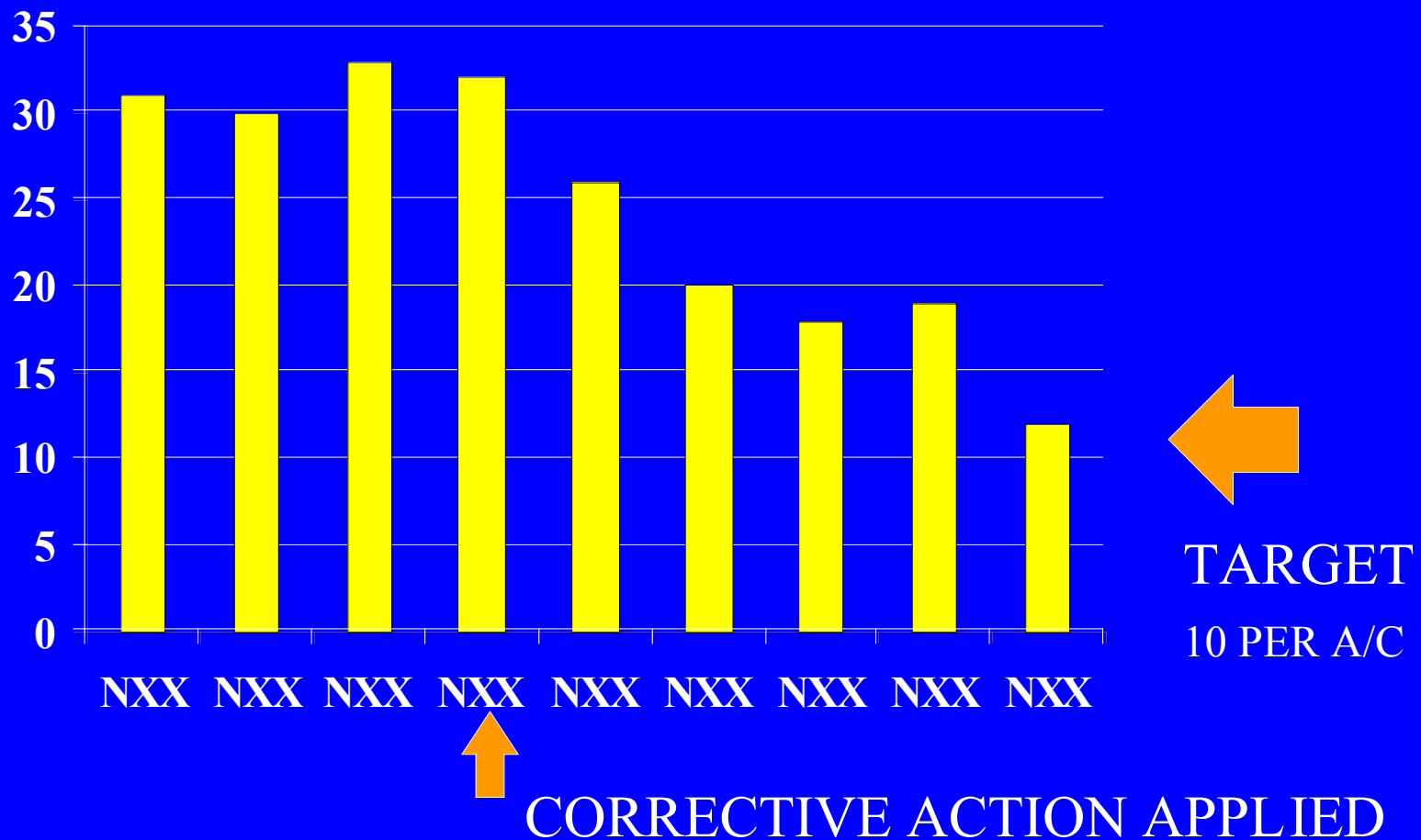
- **Operational audits**
- **System evaluations**
- **FAA checklist audits**

Measurement Systems

Performance analysis and feedback

- Pre-delivery QC discrepancy analysis
- Post delivery operational performance evaluation
- Records accuracy tracking

QC Delivery Discrepancies



Training / Education

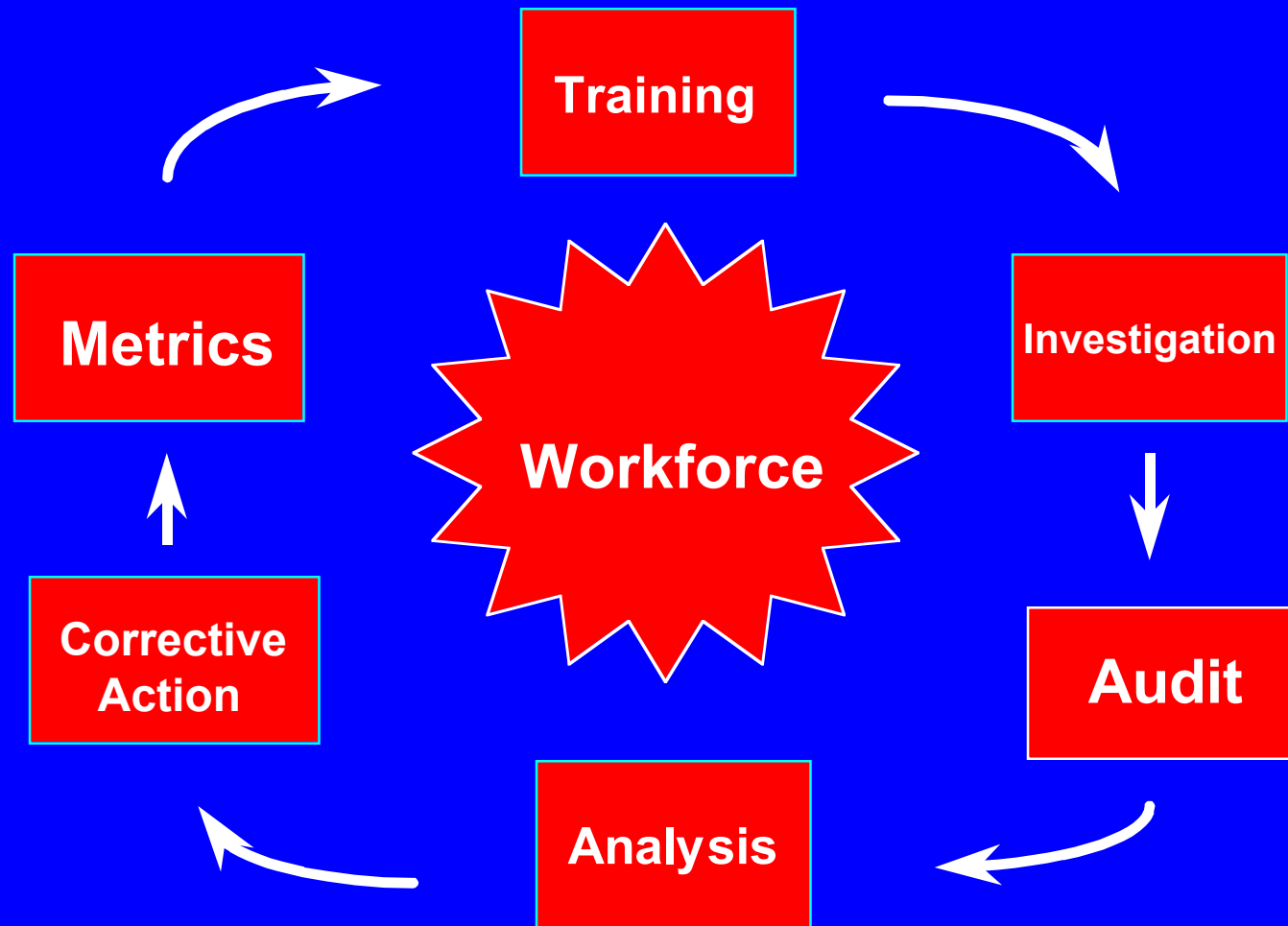
- **Maintenance error investigator training (MEDA) 72 people have been trained**
- **Human factors training (MRM) 1700 people have completed training**
- **Specialized feedback/ training based on investigation and audit findings**
- **FAA regulation and policy reviews**

Maintenance Resource Management Training

Focus on human performance

- **Situation awareness**
- **Error chain**
- **Stress**
- **Communications**
- **Assertiveness**
- **Team synergy**

Maintenance Error Reduction Road Map



DATA BASE DEMO



General

Event

Error

Contributing Factor

Reference

Corrective Action

Section I - General

Error Source :

Airline

Station of Incident

PAE 3 DIGIT STATION ID (PAE)

Aircraft Type

Engine Type

Tail Number

Fleet number

ATA Code

Aircraft Zone

Department/ML

Originator Ref #

Evaluator

Analyst Telephone #

DATE OF INVESTIGATION:

EventDate:

Time of Event

Shift of Error

Type of Maintenance

Maintenance Description

Investigation Completed?

24 HR (Military)

R-22:

JOB NUMBER:

SHOP:

MWO:

ESTIMATED LABOR HOURS:

ESTIMATED COST-MATERIAL:

0

\$0.00

Error ID #: (AutoNumber



REPORT CRITERIA**Select Report:****MEDA Number:****SEDA Supervisor:****Evaluator:****Length EMP:****Customer:****Injury Type:****ATA Number:****Injury Location:****ML / Department:****Equipment:****Error type:****Error Category:****Aircraft Type:****Responsible:****Tail Number:****Action Type:****Corrective Action Completed:****Temporary ML Assignment:****OSHA Recordable:****Event Date:**

Start Period:

End Period:

Event Time:

Start Time:

End Time:

Follow-Up Date:

Start Period:

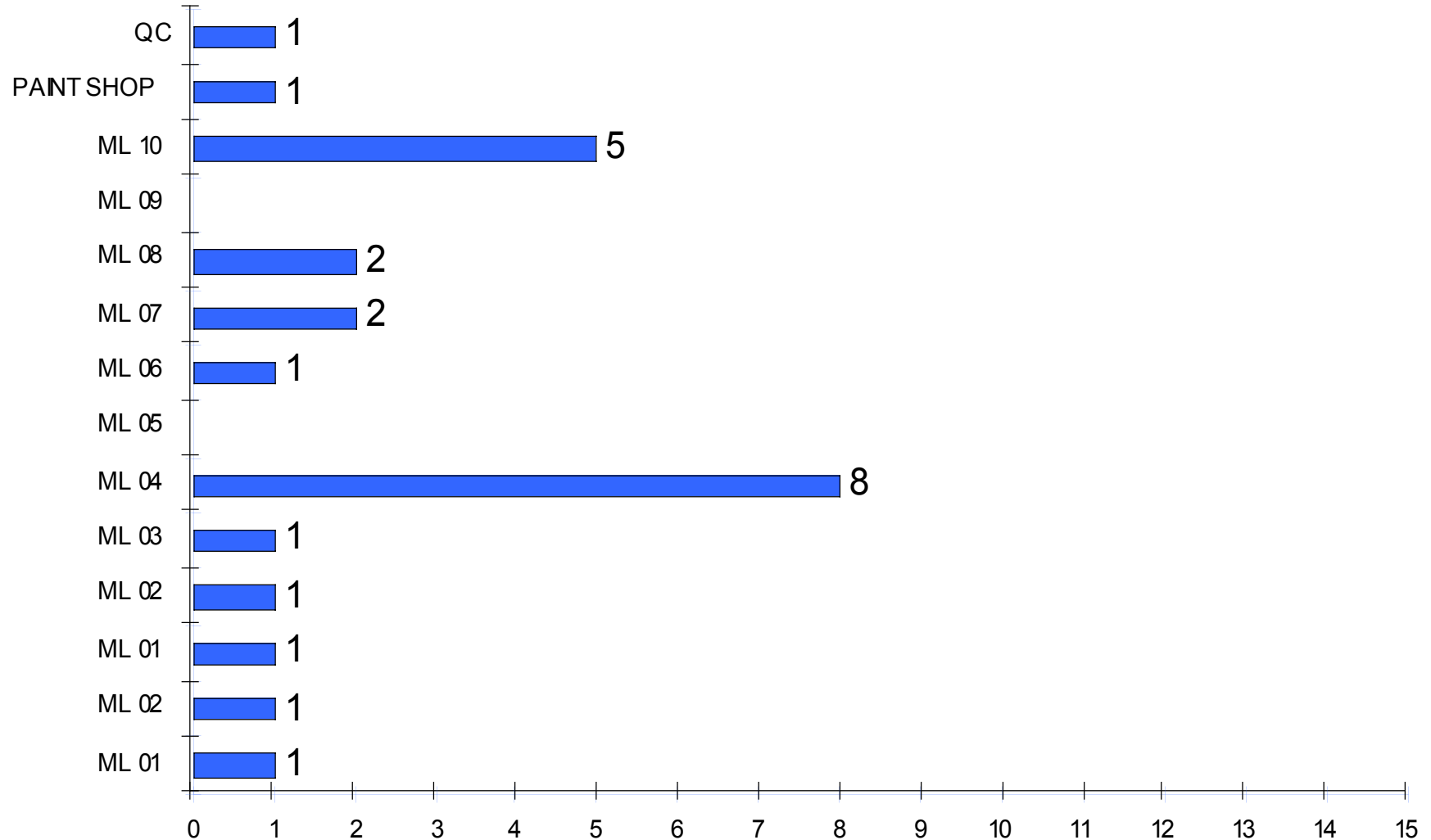
End Period:

Roster of Meda/Seda investigators

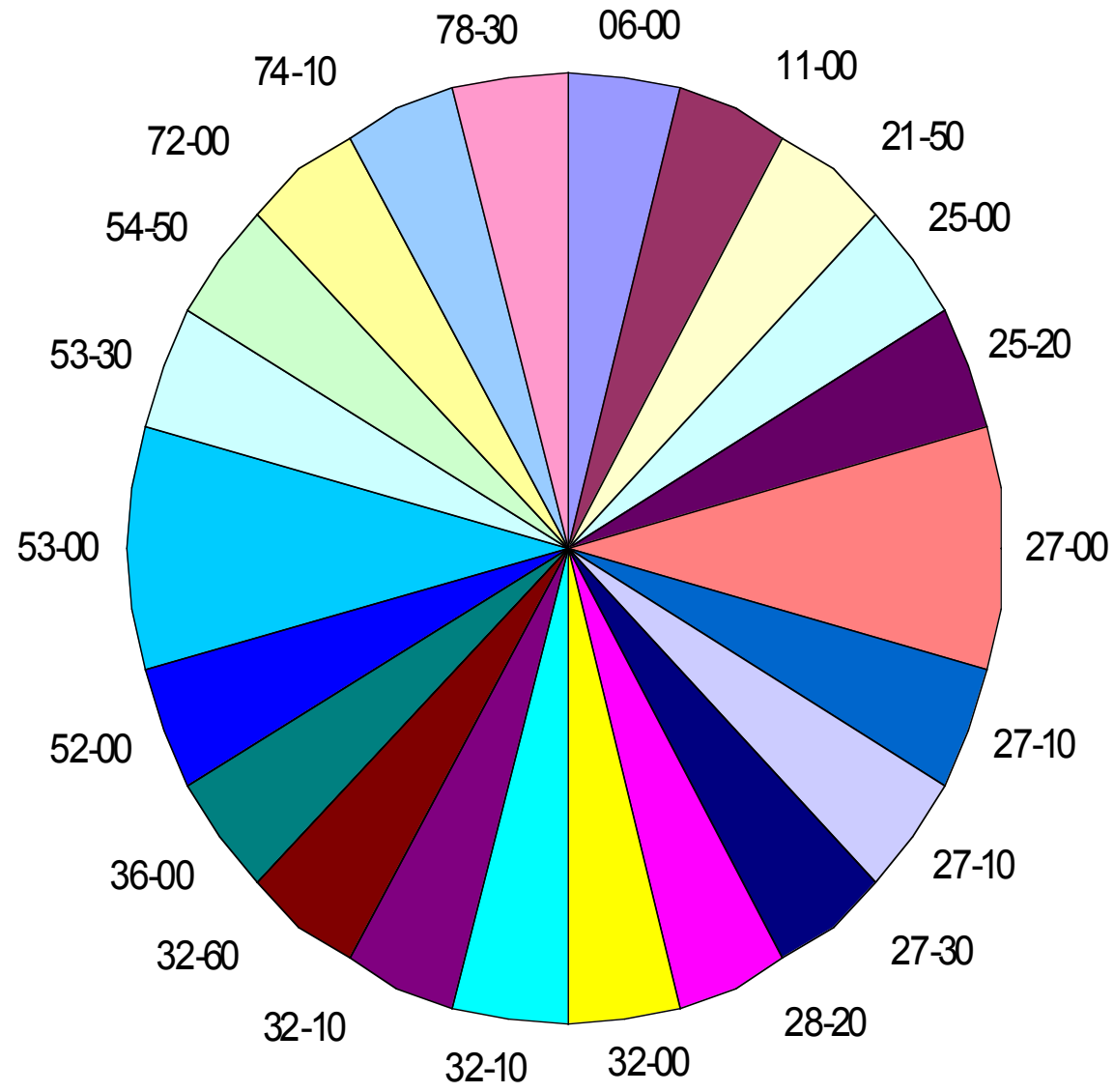


Maintenance Errors by Department

Jan 97 to Jun 98



Maintenance Errors By ATA



REPORT CRITERIA

Select Report:

Details of Error Summary

MEDA Number:

SEDA Supervisor:

Evaluator:

Length EMP:

Customer:

Injury Type:

ATA Number:

27-00

Injury Location:

ML / Department:

Equipment:

Error type:

Error Category:

Aircraft Type:

737

Responsible:

Tail Number:

Action Type:

Corrective Action Completed:



Temporary ML Assignment:



OSHA Recordable:



Event Date:

Start Period:

End Period:

Event Time:

Start Time:

End Time:

Follow-Up Date:

Start Period:

End Period:

Roster of Meda/Seda investigators





Aerospace

Airframe Services Division

ERROR DECISION AID

ERROR DETAIL REPORT

REPORT CRITERIA:

Airline

Aircraft 737

Tail Number

ATA # 27-00

Evaluator

ML / Department

Error Type

1. Improper Installation

Wrong Equipment / Part Installed

Meda # 250 Wrong attaching hardware installed on L/H Aileron Trim Tab.

Incomplete Installation

Meda # 40 Bolt for Fail-safe link for the #8 flap carriage was left loose.

Data sharing concept

